

Claims

I claim:

1. A disc drive, comprising:
 - a tray having a track, said track including a first end and a second end;
 - a chassis having a shaft, said shaft engaging with said track, and as said tray moves into said disc drive, said shaft moving from said first end toward said second end; and
 - a block, disposed at one side of said second end, for preventing said shaft escaping from said track through said second end.
2. The disc drive of claim 1, wherein said block is a trapezoid block, said shaft further comprises a first recess corresponding to said trapezoid block, and as said shaft moves from said first end toward said second end, said trapezoid block mates with said first recess for preventing said shaft from detaching off said track.
3. The disc drive of claim 2, said tray including a bottom surface, said trapezoid block including a first surface and a second surface, said first surface being adjacent to and substantially parallel to said tray bottom surface, said second surface being opposed to said first surface and defining an angle with respect to said bottom surface.
4. The disc drive of claim 2, said tray including a bottom surface, said trapezoid block including a first surface and a second surface, said first surface being adjacent to said tray bottom surface, said second surface being opposed to said first surface, said first surface and said second surface respectively defining a first and second angle with respect to said bottom surface.

5. The disc drive of claim 1, wherein said block further includes a recess, and said shaft includes a protrusion corresponding to said recess, and said shaft moves from said first end toward said second end, said recess mates with said protrusion for preventing said shaft from detaching off said track.
6. The disc drive of claim 5, wherein said recess is a trapezoid recess and said protrusion is a trapezoid protrusion.
7. The disc drive of claim 6, said tray including a bottom surface, said protrusion of said shaft including a first surface and a second surface, said first surface being adjacent to and substantially parallel to said tray bottom surface, said second surface being opposed to said first surface and defining an angle with respect to said bottom surface.
8. The disc drive of claim 6, said tray including a bottom surface, said protrusion of said shaft including a first surface and a second surface, said first surface being adjacent to said tray bottom surface, said second surface being opposed to said first surface, said first surface and said second surface respectively defining a first and second angle with respect to said bottom surface.
9. A disc drive having a housing, comprising:
 - a first chassis disposed in said housing;
 - a cam rack slidably disposed on said first chassis, said cam rack having a slot;
 - a second chassis having a pin engaging with said slot, and, as said cam rack is in a

first position, said second chassis being in a low position, and as said cam rack is in a second position, said second chassis being in a high position; a turntable, disposed on said second chassis, for selectively supporting a disc; a tray movably disposed on said first chassis, said tray including a track, said track defining a first end and a second end; a clamper disposed in said housing, as said second chassis is in said low position, said clamper moving away from said turntable, and as said second chassis is in said high position, said clamper touching with said turntable; a shaft, disposed on said cam rack, engaging with said track, as said tray moves into said disc drive, said shaft moving from said first end toward said second end; and a block, disposed at said second end of said track, for selectively blocking said shaft and for preventing said shaft escaping from said track through said second end; wherein, as said shaft hits against said block, said block provides a lateral force allowing said cam rack to move from said second position toward said first position forcing said second chassis to move from said high position to said low position and to move said turntable away from said clamper thereby preventing said turntable and said clamper from deformation.

10. The disc drive of claim 9, wherein said block is a trapezoid block, said shaft further comprises a recess corresponding to said trapezoid block, and as said shaft moves from said first end toward said second end, said trapezoid block mates with said recess for preventing said shaft from detaching off said track.

11. The disc drive of claim 10, said tray including a bottom surface, said trapezoid block including a first surface and a second surface, said first surface being adjacent to and substantially parallel to said tray bottom surface, said second surface being opposed to said first surface and defining an angle with respect to said bottom surface.
12. The disc drive of claim 10, said tray including a bottom surface, said trapezoid block including a first surface and a second surface, said first surface being adjacent to said tray bottom surface, said second surface being opposed to said first surface, said first surface and said second surface respectively defining a first and second angle with respect to said bottom surface.
13. The disc drive of claim 9, wherein said block further includes a recess, and said shaft includes a protrusion corresponding to said recess, and said shaft moves from said first end toward said second end, said recess mates with said protrusion for preventing said shaft from detaching off said track.
14. The disc drive of claim 13, wherein said recess is a trapezoid recess and said protrusion is a trapezoid protrusion.
15. The disc drive of claim 14, said tray including a bottom surface, said protrusion of said shaft including a first surface and a second surface, said first surface being adjacent to and substantially parallel to said tray bottom surface, said second surface being opposed to said first surface and defining an angle with respect to said bottom surface.

16. The disc drive of claim 14, said tray including a bottom surface, said protrusion of said shaft including a first surface and a second surface, said first surface being adjacent to said tray bottom surface, said second surface being opposed to said first surface, said first surface and said second surface respectively defining a first and second angle with respect to said bottom surface.